

SECTION 01090
ABBREVIATIONS AND SYMBOLS

PART 1 - GENERAL

1.01 DESCRIPTION.

This Section summarizes without limitation the abbreviations and symbols used in the Contract Documents.

1.02 ABBREVIATIONS.

Abbreviations used in the Contract Documents shall be interpreted according to their recognized and well-known technical or trade meanings. Such abbreviations include, but are not limited to, the following:

A	Ampere/Area
AA	Aluminum Association
AASHTO	American Association of State Highway and Transportation Officials
AB	Anchor Bolt/Aggregate Base
ABAN	Abandoned
ABC	Asphalt Base Course
AC	Acre/Asphalt Concrete/Alternating Current
ACI	American Concrete Institute
ACP	Asbestos-Cement Pipe
AE	Architect-Engineer
AGA	American Gas Association
AGG	Aggregate
AGMA	American Gear Manufacturers Association
AI	The Asphalt Institute
AIA	American Institute of Architects
AIMA	Acoustical and Insulating Materials Association
AISC	American Institute of Steel Construction, Inc.
AISI	American Iron and Steel Institute
AL	Aluminum
AMB	Ambient
AMCA	Air Moving and Conditioning Association, Inc.
AMP	Ampere
ANG	Angle
ANSI	American National Standards Institute
APA	American Plywood Association
API	American Petroleum Institute
APWA	American Public Works Association
ARCH	Architecture/Architectural
ARVV	Air-Release and Vacuum Valve
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigeration and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers

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ABBREVIATIONS & SYMBOLS

ASPH	Asphalt
ASSY	Assembly
ASTM	American Society for Testing and Materials
ATS	Automatic Transfer Switch
AV	Air Vacuum
AVE	Avenue
AVG	Average
AVR	Air & Vacuum Release Assembly
AVV	Air & Vacuum Valve Assembly
AWG	American Wire Gage
AWI	Architectural Woodwork Institute
AWPA	American Wood Preservers Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BC	Beginning of Curve/Back of Curb/Bare Copper
BEG	Begin
BETW	Between
BF	Blind Flange
BFV	Butterfly Valve
BFP	Backflow Preventer
BHP	Brake Horsepower
BK	Back/Brake
BKR	Breaker
BL	Building
BLK	Block
BLVD	Boulevard
BM	Bench Mark/Beam
BO	Blowoff
BOT	Bottom
BP	Bottom of Pipe
BRG	Bearing B
RNZ	Bronze
BTN	Button
BTU	British Thermal Unit
BUR CBL	Buried Cable
BVC	Begin Vertical Curve
BW	Block Wall
C	Conduit/Celsius/Civil Drawings/Copper
CAL/OSHA	State of California Division of Industrial Safety Orders, and General Industrial Safety Orders
CAP	Capacity
CATV	Cable TV
CB	Catch Basin/Circuit Breaker
CBM	Certified Ballast Manufacturers
CC	Cooling Coil
CD	Cross Drain/Condensate Drain/Ceiling Diffuser

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ABBREVIATIONS & SYMBOLS

CEM	Cement
CF	Cubic Feet/Curb Face
CFH	Cubic Feet Per Hour
CFM	Cubic Feet Per Minute
CFS	Cubic Feet Per Second
CG	Construction Grade
C&G	Curb and Gutter
CHG	Change
CHKD PL	Checkered Plate
CI	Cast-Iron/Curb Inlet
CIP	Cast-In-Place/Cast-Iron Pipe
CJ	Construction Joint
CL	Centerline/Class/Clearance/Chlorine
CLFMI	Chain Link Fencing Manufacturers Institute
CLR	Clear
CML&C	Cement-Mortar Lined & Coated
CMP	Corrugated Metal Pipe
CMU	Concrete Masonry Unit
CO	Cleanout/Conduit Only
COL	Column
COMM	Communication
COMP	Composite
COMPL	Complete
CONC	Concrete
CONN	Connection
CONST	Construct or Construction
CONT	Continuous
CONTR	Contractor
COORD	Coordinate/Coordinated
COP	Copper
COR	Corner
CORP	Corporation
CP	Cathodic Protection
CPLG	Coupling
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standard, US Department of Commerce
CTG	Coating
CTR	Center
CTS	Cathodic Test Station
CULV	Culvert
CU YD, C Y	Cubic Yard
CYL	Cylinder
D	Degree of Curvature
DB	Direct Buried/Decibel
DBL	Double
DC	Direct Current
DEPT	Department

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ABBREVIATIONS & SYMBOLS

DET	Detail/Detour
DG	Decomposed Granite
DI	Drop Inlet
DIA	Diameter
DIAG	Diagonal
DIM	Dimension
DIP	Ductile-Iron Pipe
DIPRA	Ductile-Iron Pipe Research Association
DISCH	Discharge
DIST	Distance
DMH	Drop Manhole
DN	Down
DR	Drain/Door
DSL	Diesel
DWG	Drawing
DWY	Driveway
E	East/Electrical Drawings
EA	Each
EC	End of Curve
ECC	Eccentric
ED	External Distance
EE	Each End/Electrical Engineer
EF	Each Face/Exhaust Fan
EFF	Efficiency
EFL	Effluent
EGL	Energy Grade Line
ELEC	Electric
ELEV	Elevation
ELP	Elliptical
ENC	Encasement or Encased
ENCL	Enclosure
ENG	Engine
ENGR	Engineer
EOR	Engineer of Record
EP	Edge of Pavement/Explosion Proof
EPA	Environmental Protection Agency (Federal)
EQ	Equation
EQL	Equal
ESMT	Easement
EST	Estimate or Estimated
ETC	Etcetera
ETL	Electrical Testing Laboratories
EVC	End Vertical Curve
EW	Each Way
EXC	Excavate or Excavation
EXP	Expansion
EXIST	Existing

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ABBREVIATIONS & SYMBOLS

EXT	Exterior/Extension
F	Fahrenheit/Floor
FAB	Fabricate
FBRBD	Fiberboard
FCV	Flow Control Valve
FDC	Fire Department Connection
FD	Floor Drain
FDN	Foundation
FE	Flanged End/Fence
FED SPEC	Federal Specification
FF	Finished Floor/Flat Face
FG	Finished Grade
FH	Fire Hydrant
F&I	Furnish and Install
FIG	Figure
FIP	Female Iron Pipe Thread
FIT	Fitting
FL	Flow Line
FLG	Flange
FM	Force Main/Factory Mutual
FMH	Flexible Metal Hose
FNSH	Finish
FPC	Flexible Pipe Coupling
FPM	Feet Per Minute
FPS	Feet Per Second
FS	Finished Surface/Floor Sink/Federal Specifications/Fire Service
FSTNR	Fastener
FT	Feet
FTG	Footing
FUT	Future
G	Gas/General Drawings/Gram
GA	Gage
GAL	Gallon
GALV	Galvanized
GB	Grade Break
GDR	Guard Rail
GE	Grooved-End
GENL	General
GFI	Ground Fault Interrupter
GND	Ground
GPD	Gallons Per Day
GPM	Gallons Per Minute
GR	Grade
GSKT	Gasket
GUT	Gutter
GV	Gate Valve
H	Humidistat/Horizontal

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ABBREVIATIONS & SYMBOLS

HARN	Harness
HB	Hose Bib
HD	Heavy Duty
HDPE	High-Density Polyethylene Pipe
HGL	Hydraulic Grade Line
HI	Hydraulics Institute
HORIZ	Horizontal
HP	Horsepower/High Pressure/High Point
HR	Hour/Handrail
HS	High Strength
HT	Height
HV	Hose Valve
HVAC	Heating, Ventilating, and Air Conditioning
HW	Headwall/Hot Water
HWL	High Water Level
HWY	Highway
HYDR	Hydraulic
HZ	Hertz (cycles per second)
I	Intersection Angle/Instrumentation Drawings
ICBO	International Conference of Building Officials
ID	Inside Diameter
IE	Invert Elevation
IEEE	Institute of Electrical and Electronic Engineers
IN	Inches
INCL	Include
INL	Inlet
INSUL	Insulating
INSTL	Install or Installation
INT	Interior
INTR	Intersection
INV	Invert
I/O	Inlet/Outlet
IP	Iron Pipe
IPCEA	Insulated Power Cable Engineers Association
IRR	Irrigation
JB	Junction Box
JCT	Junction
JN	Join
JT	Joint
KG	Kilogram
KIPS	Thousands of Pounds
KM	Kilometer
KPA	Kilopascal
KV	Kilovolt
KW	Kilowatt
KWH	Kilowatt-Hour
KWHM	Kilowatt-Hour Meter

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ABBREVIATIONS & SYMBOLS

L	Length of Curve/Long/Landscaping Drawings
LATL	Lateral
LB	Pound
LCL	Local
LF	Linear Foot
LNDSCP	Landscaping
LOCN	Location
LP	Light Pole/Low Point
LS	Lift Station
LT	Left/Light
LWC	Lightweight Concrete
LWL	Low Water Level
M	Mechanical Drawings/Meter
MATL	Material
MAX	Maximum
MB	Machine Bolt/Megabyte/Millibars
MC	Metal Channel
MCM	Thousand Circular Mils
ME	Machined End/Mechanical Engineer
MECH	Mechanical
MFR	Manufacturer
MG	Million Gallons/Milligram
MGD	Million Gallons Per Day
MH	Manhole
MHZ	Megahertz
MI	Malleable Iron/Mile
MIL	Military Specifications
MIN	Minimum
MIP	Male Iron Pipe Thread
MISC	Miscellaneous
MJ	Mechanical Joint
MM	Millimeter
MO	Motor Operator/Motor Operated/Masonry Opening
MOD	Modified
MON	Monument
MOT	Motor
MOV	Motor Operated Valve
MSDS	Material Safety Data Sheet
MSL	Mean Sea Level
MTD	Mounted
N	North/Neutral/Nitrogen
NA	Not Applicable
NACE	National Association of Corrosion Engineers
NAPF	National Association of Plastic Fabricators
NBS	National Bureau of Standards
NC	Normally Closed
NCV	Normally Closed Valve

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ABBREVIATIONS & SYMBOLS

NE	Northeast
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFC	National Fire Code
NFPA	National Fire Protection Association
NIC	Not in Contract
NIP	Nipple
NO	Number/Normally Open
NOM	Nominal
NRS	Non-Rising Stem
NSF	National Sanitation Foundation
NTS	Not to Scale
NTU	Nephelometric Turbidity Units
NW	Northwest
NWL	Normal Water Level
NWMA	National Woodwork Manufacturers Association
OA	Overall/Outside Air
OC	On Center/Overcurrent
OD	Outside Diameter
OE	Or Equal
OF	Outside Face
OFCI	Owner-Furnished Contractor-Installed
OHE	Overhead Electrical
OFCR	Owner-Furnished Contractor-Relocated
OPER	Operator
OPNG	Opening
OPP	Opposite
OSHA	Occupational Safety and Health Administration, U.S. Department of Labor, as defined in the General Conditions
OUTL	Outlet
OVFL	Overflow
OVHD	Overhead
P	Pole
PARA	Paragraph
PB	Push Button/Pull Box
PC	Point of Curvature/Programmable Controller
PCA	Portland Cement Association
PCC	Point of Compound Curvature/Portland Cement Concrete
PDI	Plumbing and Drainage Institute
PE	Plain End/Polyethylene/Professional Engineer
PEN	Penetration
PG	Pressure Gage
PI	Point of Intersection
PIP	Protect in Place
PIV	Post Indicator Valve
PJTN	Projection
PKWY	Parkway

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ABBREVIATIONS & SYMBOLS

PL	Plate/Property Line
PLATF	Platform
PLF	Pounds Per Lineal Foot
PM	Parcel Map
PNL	Panel
PO	Push-On
POB	Point of Beginning
POC	Point of Connection
POR	Portion
PP	Power Pole/Polypropylene
PPB	Parts Per Billion
PPM	Parts Per Million
PR	Pair
PRC	Point of Reverse Curve
PRESS	Pressure
PRL	Parallel
PROP	Proposed
PRVC	Point of Reverse Vertical Curve
PRS	Pressure Reducing Station
PS	Product Standard, U.S. Department of Commerce
PSI	Pounds Per Square Inch
PSIG	Pounds Per Square Inch Gage
PSF	Pounds Per Square Foot
PT	Point of Tangency
PV	Plug Valve
PVC	Polyvinyl Chloride/Point of Vertical Curvature
PVCC	Point of Compound Vertical Curve
PVI	Point of Vertical Intersect
PVMT	Pavement
PVT	Private
PWR	Power
Q	Flow Rate
QTY	Quantity
R	Right/Radius
RC	Reinforced Concrete
RCP	Reinforced Concrete Pipe
RD	Road
RDC	Reduce
RDCR	Reducer
RDWY	Roadway
REF	Reference
REINF	Reinforce or Reinforced
RELOC	Relocate
REQD	Required
RES	Reservoir
REV	Revise/Revision
RH	Relative Humidity

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ABBREVIATIONS & SYMBOLS

RJ	Restrained Joint
RND	Round
RM	Record Map
ROS	Record of Survey
RPM	Revolutions Per Minute
RS	Road Survey
RST	Reinforcing Steel
RT	Right
R/W	Right-of-Way
RW	Recycled Water
RSGV	Resilient-Seat Gate Valve
S	South/Sewer
SAE	Society of Automotive Engineers
SAN	Sanitary
SC	Seal Coat
SCADA	Supervisory Control and Data Acquisition
SCFM	Standard Cubic Feet Per Minute
SCP	Steel Cylinder Pipe
SCH	Schedule
SCRN	Screen
SD	Storm Drain
SD CO	San Diego County
SDCDS	San Diego County Design Standards
SDG	Siding
SDG&E	San Diego Gas & Electric
SDI	Steel Deck Institute
SDRSD	San Diego Regional Standard Drawings
SE	Southeast
SECT	Section
SF	Square Feet
SGL	Single
SH	Sheet/Sheeting/Shielded
SHT	Sheet
SIM	Similar
SJI	Steel Joist Institute
SLP	Slope
SLV	Sleeve
SM	Sheet Metal
SMACNA	Sheet Metal and Air-Conditioning Contractors National Association
SOL	Solenoid
SOV	Solenoid-Operated Valve
SP	Space/Steel Pipe/Static Pressure/Spare/Stand Pipe
SPCG	Spacing
SPEC	Specification
SPLC	Splice
SPR	Simplified Practice Recommendations, U.S. Department of Commerce
SPRT	Support

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ABBREVIATIONS & SYMBOLS

SQ	Square
SS	Stainless Steel
SSPC	Steel Structures Painting Council
SSPWC	Standard Specifications for Public Works Construction
ST	Street
STA	Station
STBY	Standby
STD	Standard
STK	Stake
STL	Steel
STR	Straight
STRL	Structural
STRUCT	Structure
SURF	Surface
SW	Southwest
SWG	Swing
SWK	Sidewalk
SYMM	Symmetrical
SYS	System
T	Ton/Tangent Length of Curve
TAN	Tangent
TB	Top of Bank/Terminal Board
TBG	Tubing
TBM	Temporary Bench Mark
TC	Top of Curb
TC	Top of Cleanout
TDH	Total Dynamic Head
TDS	Total Dissolved Solids
TEL	Telephone
TEMP	Temperature/Temporary
TF	Top of Footing
TG	Top of Grate
THD	Thread or Threaded
THK	Thick
TOS	Top of Slab
TOT	Total
TP	Top of Pipe
TRD	Thread
TS	Tube Sheet
TW	Top of Wall
TYP	Typical
UBC	Uniform Building Code
UD	Underdrain
UG	Underground
UL	Underwriters' Laboratories, Inc.
ULT	Ultimate
UON	Unless Otherwise Noted

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ABBREVIATIONS & SYMBOLS

UPC	Uniform Plumbing Code
UTC	Underground Telephone Cable
UTIL	Utilities
V	Vent/Valve/Volt/Vertical
VAC	Vacuum/Volts, Alternating Current
VC	Vertical Curve
VCMWD	Valley Center Municipal Water District
VEL	Velocity
VERT	Vertical
VFD	Variable Frequency Drive
VOL	Volume
VPC	Vertical Point of Curve
VPI	Vertical Point of Intersection
VPT	Vertical Point of Tangency
W	West/Watt/Wide/Water/Wire
W/	With
WCLIB	West Coast Lumber Inspection Bureau
WE	Weld End
WG	Water Gage
WIC	Woodwork Institute of California
WL	Waterline
WLD	Welded
WM	Water Meter
W/O	Without
WP	Waterproof/Working Point
WSE	Water Surface Elevation
WSP	Water Stop
WT	Weight
WTR	Water
WWF	Welded Wire Fabric
WWM	Woven Wire Mesh
WWPA	Western Wood Products Association
WWR	Welded Wire Reinforcement
YCO	Yard Cleanout
YD	Yard
YP	Yield Point
YR	Year
YS	Yield Strength
X-ING	Crossing (Utility)

1.03 SYMBOLS. The symbols are as defined on the Contract Drawings.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

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ABBREVIATIONS & SYMBOLS

Not Used.

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